

Data Path : Z:\HPCHEM1\BNA\_E\DATA\BE013015\  
 Data File : BE089463.D  
 Acq On : 31 Jan 2015 8:59  
 Operator : TP/IZ  
 Sample : MDL-06-W  
 Misc : MDL-WATER-0.1/0.2  
 ALS Vial : 28 Sample Multiplier: 1

Instrument :  
 BNA\_E  
 ClientSampleId :

Quant Time: Feb 02 00:33:52 2015  
 Quant Method : Z:\HPCHEM1\BNA\_E\METHODS\SIMPAH-BE013015.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Sat Jan 31 05:05:18 2015  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|---------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 9.59  | 152  | 54384    | 5.00 | ng    | 0.00     |
| 2) Naphthalene-d8         | 12.50 | 136  | 229701   | 5.00 | ng    | 0.00     |
| 6) Acenaphthene-d10       | 16.69 | 164  | 126458   | 5.00 | ng    | -0.01    |
| 11) Phenanthrene-d10      | 19.99 | 188  | 203462   | 5.00 | ng    | 0.00     |
| 16) Chrysene-d12          | 23.84 | 240  | 144057   | 5.00 | ng    | 0.00     |
| 22) Perylene-d12          | 25.56 | 264  | 119588   | 5.00 | ng    | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|-----------------------------|-------|------|----------|------|-------|----------|
| 3) Nitrobenzene-d5          | 10.85 | 82   | 134617   | 8.85 | ng    | 0.00     |
| 7) 2-Fluorobiphenyl         | 15.13 | 172  | 247139   | 7.42 | ng    | 0.00     |
| 18) Terphenyl-d14           | 22.48 | 244  | 201513   | 9.34 | ng    | 0.00     |

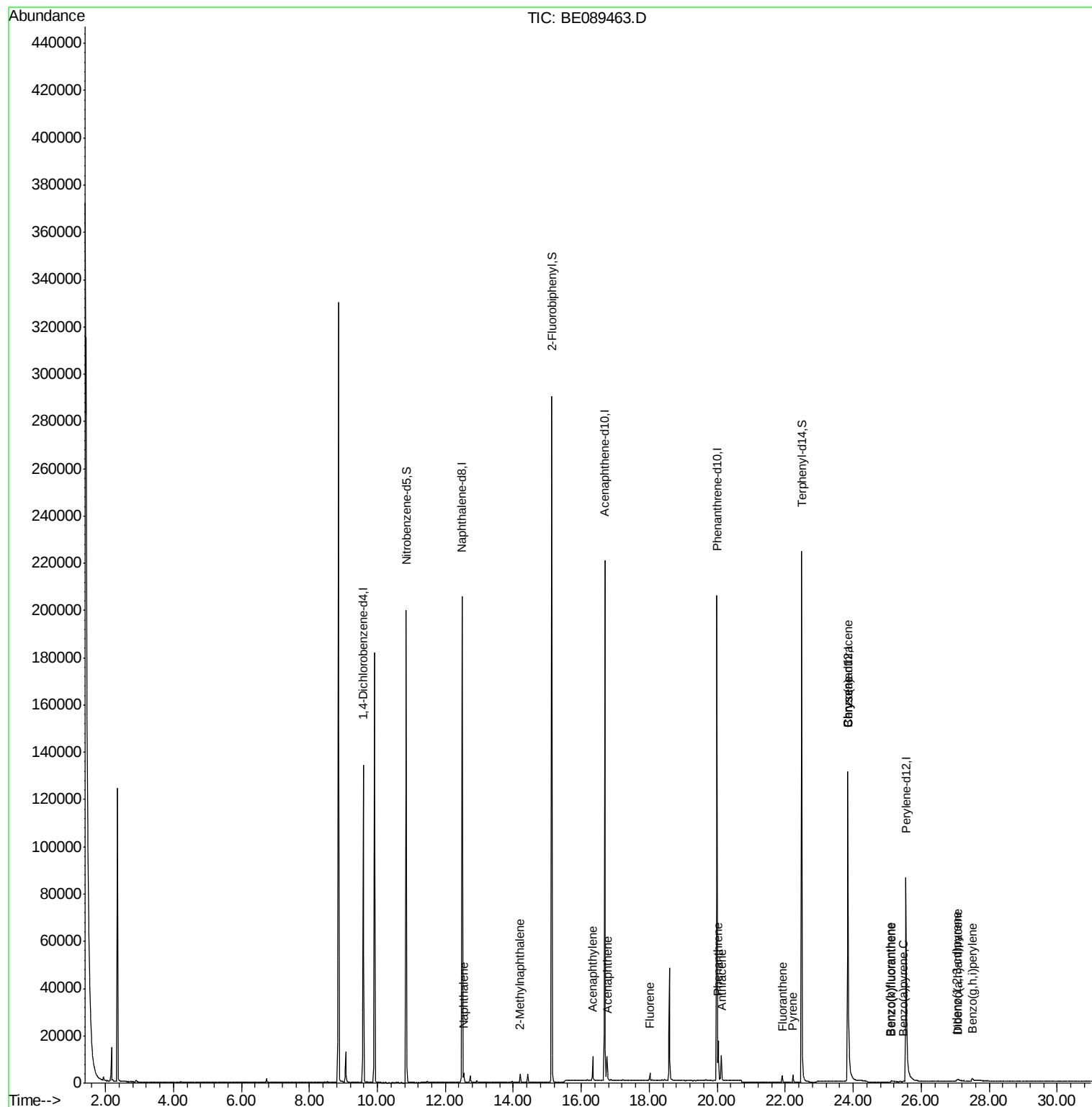
| Target Compounds           | R.T.  | QIon | Response | Conc      | Units | Qvalue |
|----------------------------|-------|------|----------|-----------|-------|--------|
| 4) Naphthalene             | 12.54 | 128  | 4101     | 0.08      | ng    | 96     |
| 5) 2-Methylnaphthalene     | 14.20 | 142  | 2324     | 0.07      | ng    | 94     |
| 8) Acenaphthylene          | 16.34 | 152  | 13023    | 0.06      | ng    | 97     |
| 9) Acenaphthene            | 16.76 | 154  | 2269     | 0.07      | ng    | 91     |
| 10) Fluorene               | 18.02 | 166  | 2324     | 0.06      | ng    | 98     |
| 12) Pentachlorophenol      | 19.66 | 266  | 278      | Below Cal |       | 94     |
| 13) Phenanthrene           | 20.03 | 178  | 15013    | 0.08      | ng    | 98     |
| 14) Anthracene             | 20.12 | 178  | 11428    | 0.06      | ng    | 98     |
| 15) Fluoranthene           | 21.91 | 202  | 2451     | 0.06      | ng    | 97     |
| 17) Pyrene                 | 22.23 | 202  | 2588     | 0.07      | ng    | 99     |
| 19) Benzo(a)anthracene     | 23.83 | 228  | 6824     | 0.06      | ng    | 96     |
| 20) Chrysene               | 23.83 | 228  | 6824     | 0.05      | ng    | 95     |
| 21) Indeno(1,2,3-cd)pyrene | 27.06 | 276  | 1721     | 0.01      | ng    | # 86   |
| 23) Benzo(b)fluoranthene   | 25.10 | 252  | 405      | 0.20      | ng    | # 55   |
| 24) Benzo(k)fluoranthene   | 25.13 | 252  | 502      | 0.02      | ng    | # 71   |
| 25) Benzo(a)pyrene         | 25.48 | 252  | 492      | 0.14      | ng    | # 59   |
| 26) Dibenzo(a,h)anthracene | 27.08 | 278  | 300      | 0.14      | ng    | # 52   |
| 27) Benzo(g,h,i)perylene   | 27.51 | 276  | 2111     | 0.02      | ng    | # 70   |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

1,4-Dichlorobenzene-d4

Concen: 5.00 ng

RT: 9.59 min Scan# 1795

Delta R.T. -0.00 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

Instrument :

BNA\_E

ClientSampleId :

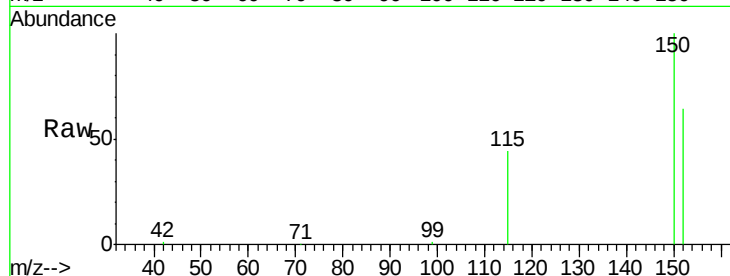
Tgt Ion:152 Resp: 54384

Ion Ratio Lower Upper

152 100

150 155.4 127.2 190.8

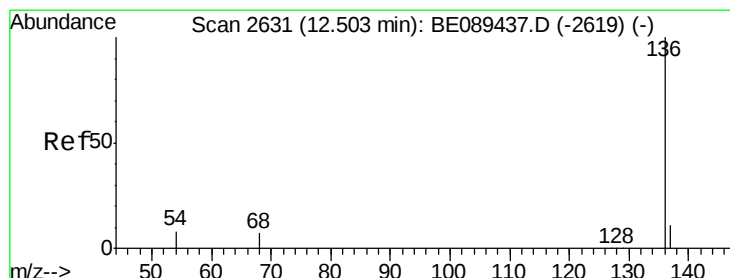
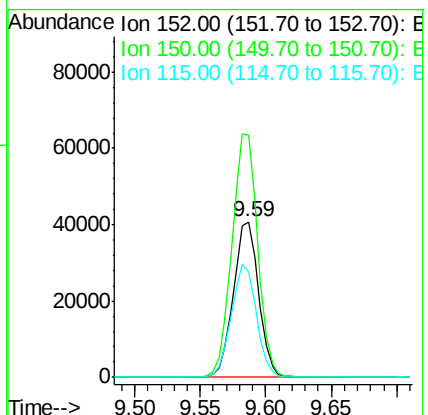
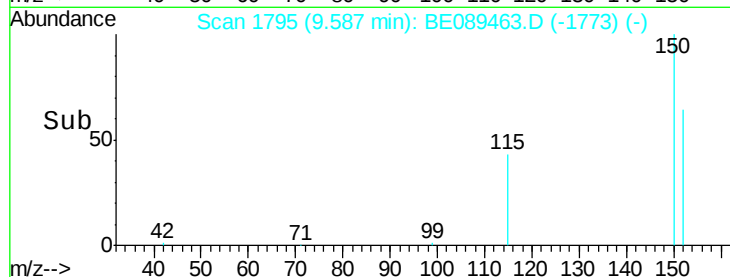
115 67.6 57.5 86.3



Abundance Ion 152.00 (151.70 to 152.70): E

Ion 150.00 (149.70 to 150.70): E

Ion 115.00 (114.70 to 115.70): E



#2

Naphthalene-d8

Concen: 5.00 ng

RT: 12.50 min Scan# 2630

Delta R.T. -0.00 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

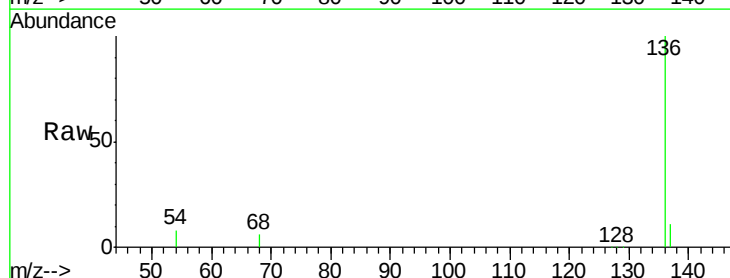
Tgt Ion:136 Resp: 229701

Ion Ratio Lower Upper

136 100

137 10.8 8.7 13.1

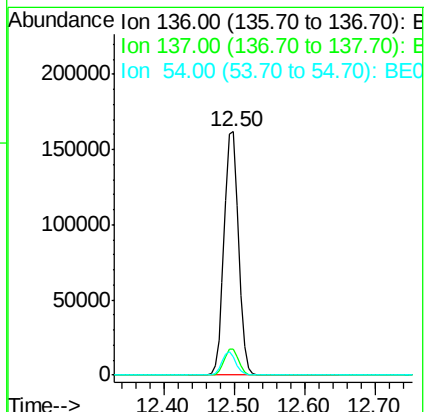
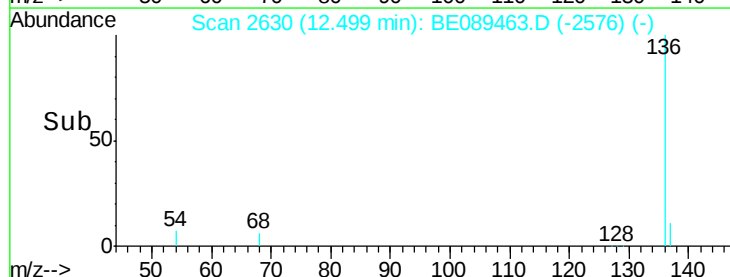
54 7.5 6.6 10.0



Abundance Ion 136.00 (135.70 to 136.70): E

Ion 137.00 (136.70 to 137.70): E

Ion 54.00 (53.70 to 54.70): BE0





#3

Nitrobenzene-d5

Concen: 8.85 ng

RT: 10.85 min Scan# 2224

Delta R.T. -0.00 min

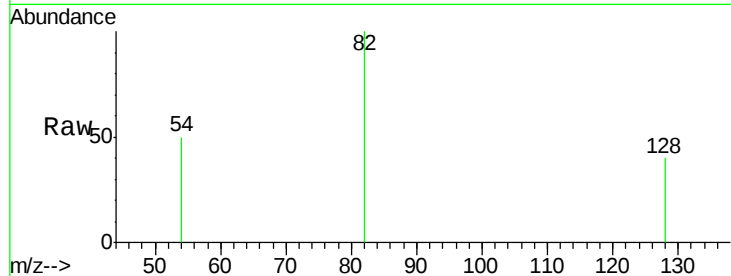
Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

Instrument :

BNA\_E

ClientSampleId :



Tgt Ion: 82 Resp: 134617

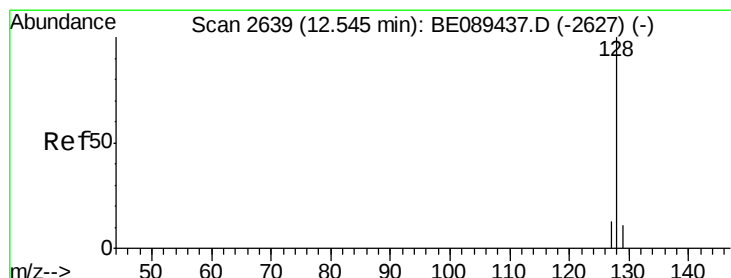
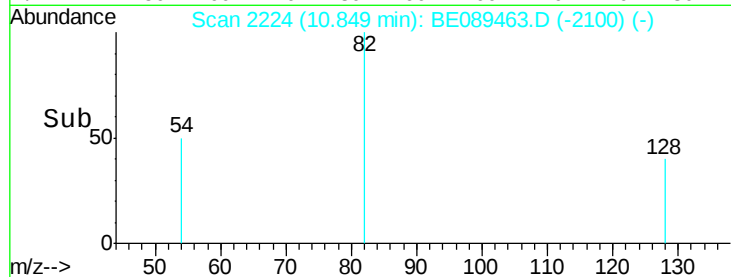
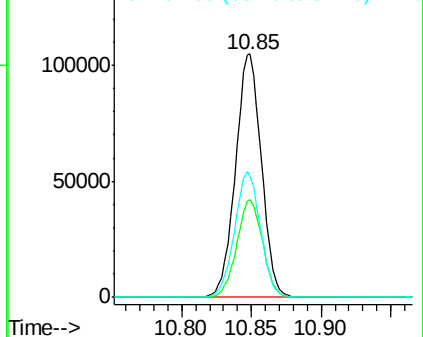
Ion Ratio Lower Upper

82 100

128 40.4 31.2 46.8

54 49.6 41.9 62.9

Abundance Ion 82.00 (81.70 to 82.70): BE0  
Ion 128.00 (127.70 to 128.70): BE0  
Ion 54.00 (53.70 to 54.70): BE0



#4

Naphthalene

Concen: 0.08 ng

RT: 12.54 min Scan# 2638

Delta R.T. -0.00 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

Tgt Ion: 128 Resp: 4101

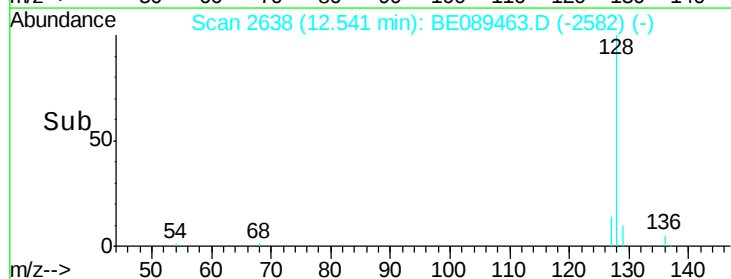
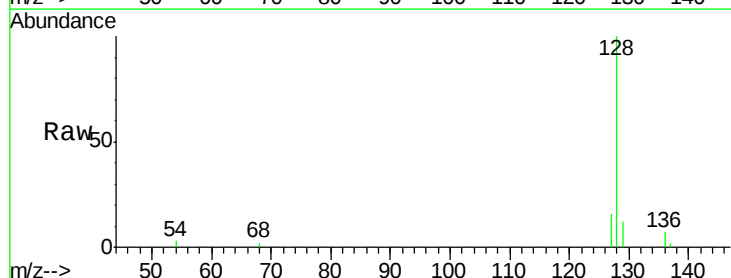
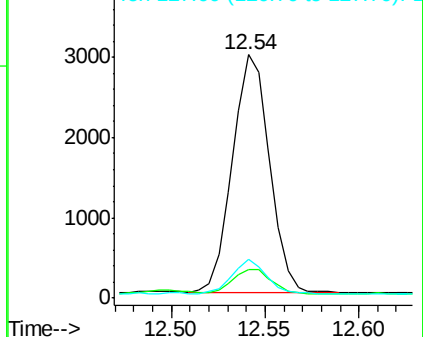
Ion Ratio Lower Upper

128 100

129 11.6 8.8 13.2

127 15.7 10.6 16.0

Abundance Ion 128.00 (127.70 to 128.70): E  
Ion 129.00 (128.70 to 129.70): E  
Ion 127.00 (126.70 to 127.70): E





#5

2-Methylnaphthalene

Concen: 0.07 ng

RT: 14.20 min Scan# 2976

Delta R.T. -0.01 min

Lab File: BE089463.D

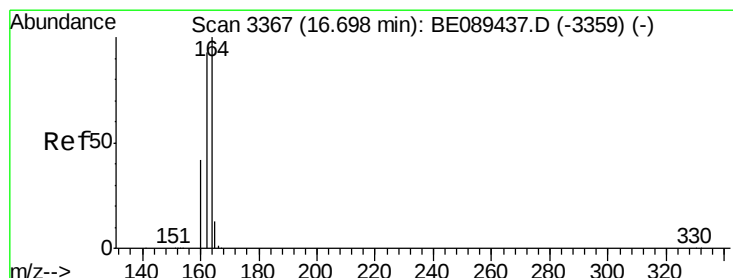
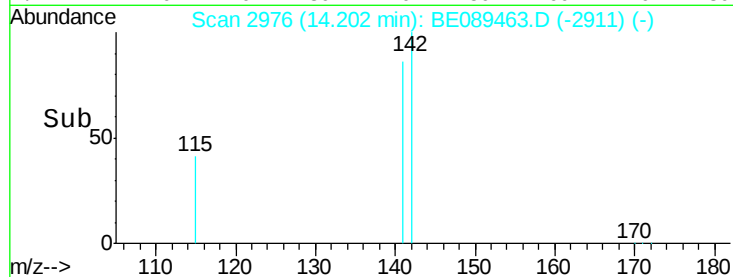
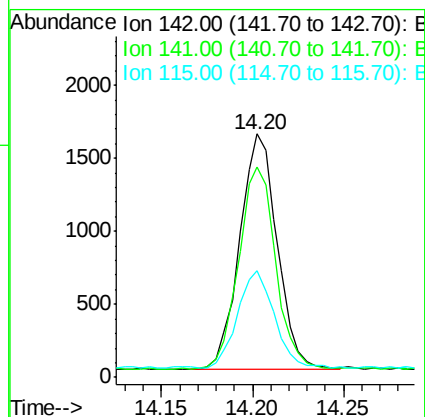
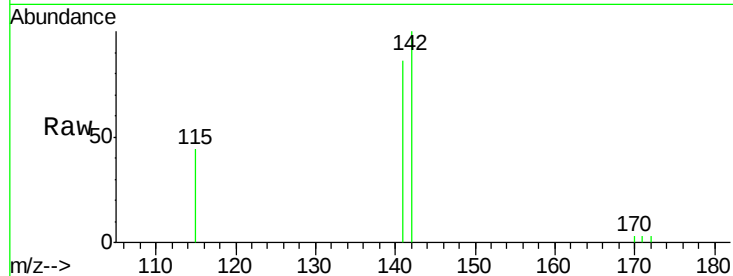
Acq: 31 Jan 2015 8:59

Instrument :

BNA\_E

ClientSampleId :

|           |       |       |      |
|-----------|-------|-------|------|
| Tgt Ion:  | 142   | Resp: | 2324 |
| Ion Ratio | Lower | Upper |      |
| 142       | 100   |       |      |
| 141       | 86.5  | 66.1  | 99.1 |
| 115       | 43.6  | 29.9  | 44.9 |



#6

Acenaphthene-d10

Concen: 5.00 ng

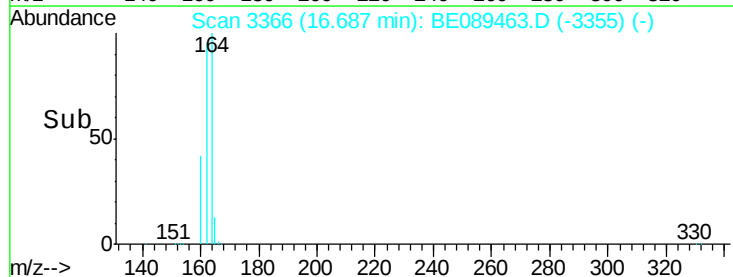
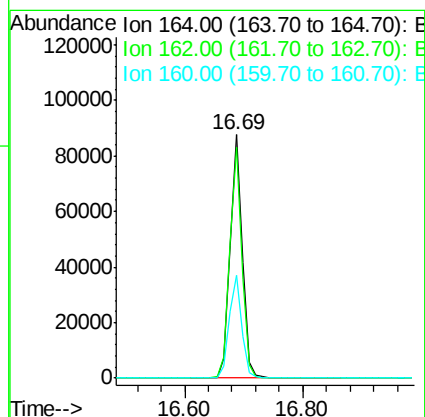
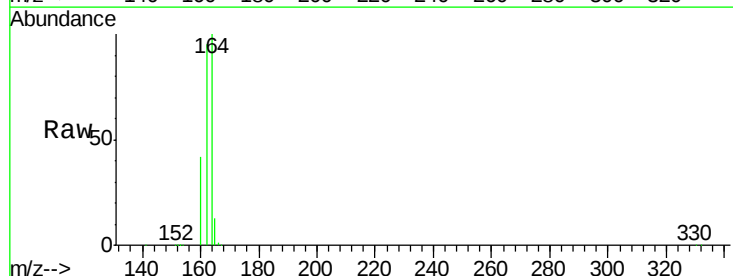
RT: 16.69 min Scan# 3366

Delta R.T. -0.01 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 164   | Resp: | 126458 |
| Ion Ratio | Lower | Upper |        |
| 164       | 100   |       |        |
| 162       | 94.7  | 74.7  | 112.1  |
| 160       | 42.5  | 33.4  | 50.0   |





#7

2-Fluorobiphenyl

Concen: 7.42 ng

RT: 15.13 min Scan# 3180

Delta R.T. -0.01 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

Instrument :

BNA\_E

ClientSampleId :

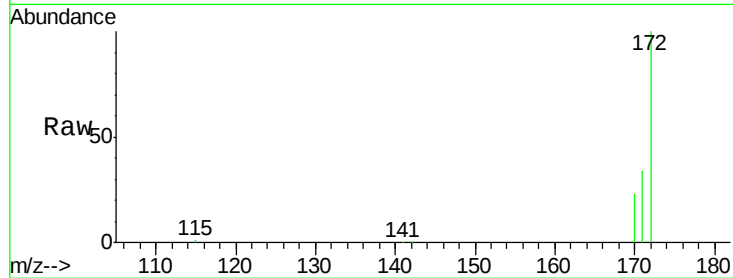
Tgt Ion:172 Resp: 247139

Ion Ratio Lower Upper

172 100

171 34.1 26.2 39.4

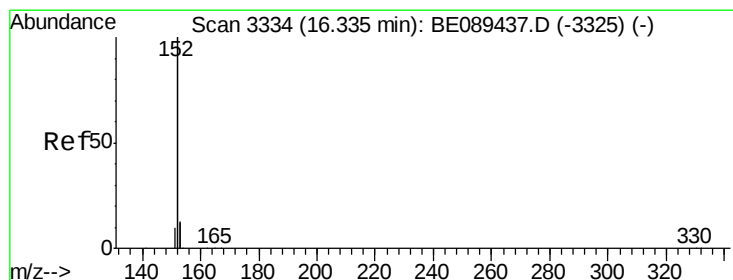
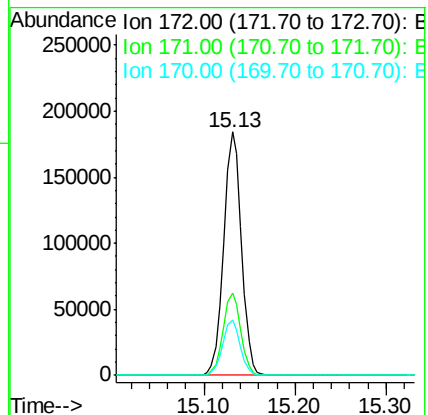
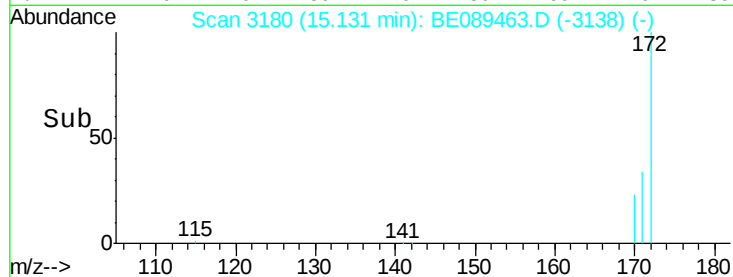
170 22.9 16.5 24.7



Abundance Ion 172.00 (171.70 to 172.70): E

Ion 171.00 (170.70 to 171.70): E

Ion 170.00 (169.70 to 170.70): E



#8

Acenaphthylene

Concen: 0.06 ng

RT: 16.34 min Scan# 3334

Delta R.T. 0.00 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

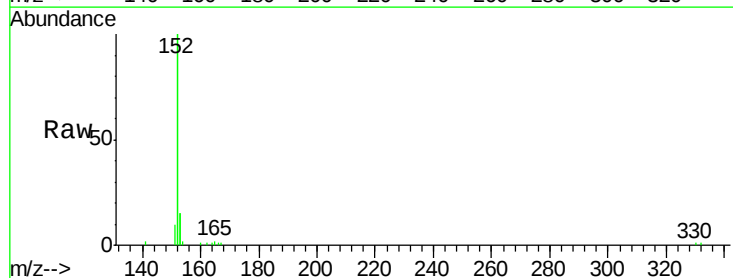
Tgt Ion:152 Resp: 13023

Ion Ratio Lower Upper

152 100

151 4.9 3.9 5.9

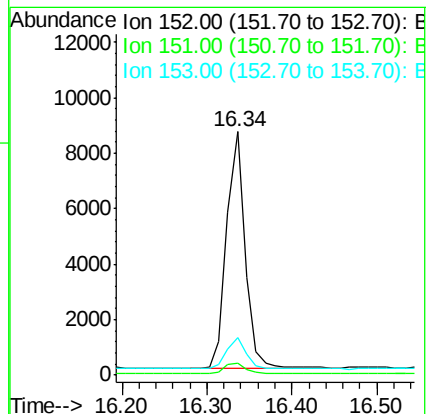
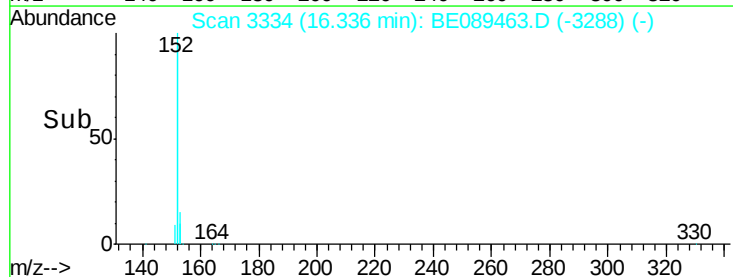
153 14.4 10.3 15.5



Abundance Ion 152.00 (151.70 to 152.70): E

Ion 151.00 (150.70 to 151.70): E

Ion 153.00 (152.70 to 153.70): E





#9

Acenaphthene

Concen: 0.07 ng

RT: 16.76 min Scan# 3373

Delta R.T. 0.00 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

Instrument :

BNA\_E

ClientSampleId :

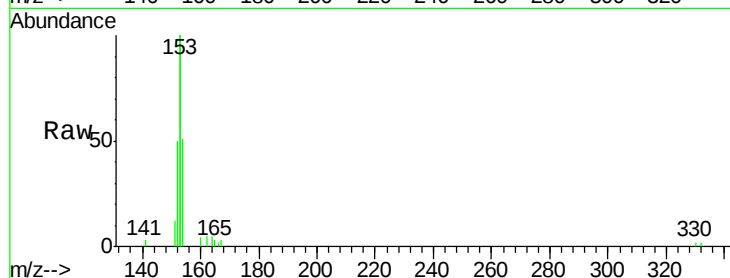
Tgt Ion:154 Resp: 2269

Ion Ratio Lower Upper

154 100

153 411.2 342.3 513.5

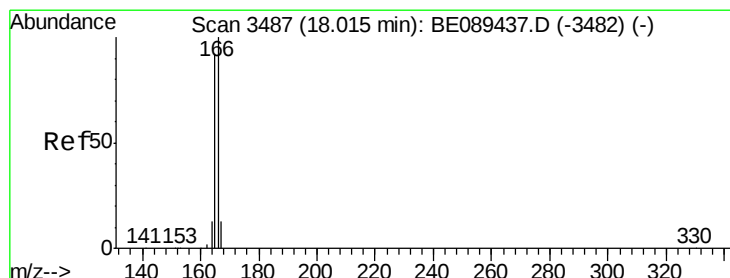
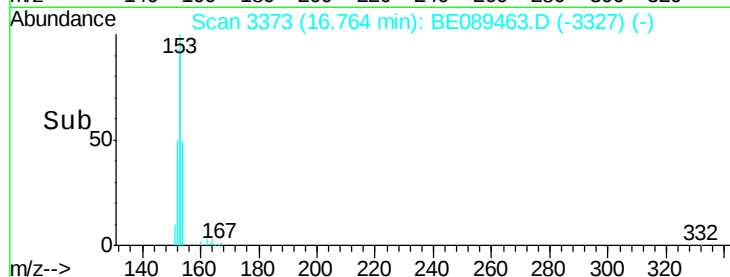
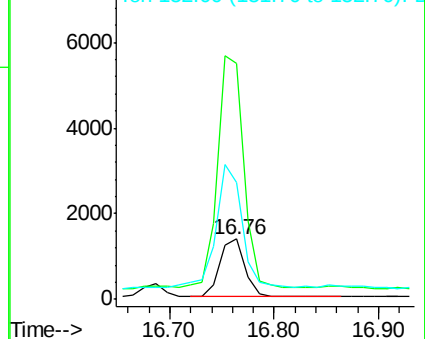
152 228.4 165.5 248.3



Abundance Ion 154.00 (153.70 to 154.70): E

Ion 153.00 (152.70 to 153.70): E

Ion 152.00 (151.70 to 152.70): E



#10

Fluorene

Concen: 0.06 ng

RT: 18.02 min Scan# 3487

Delta R.T. 0.00 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

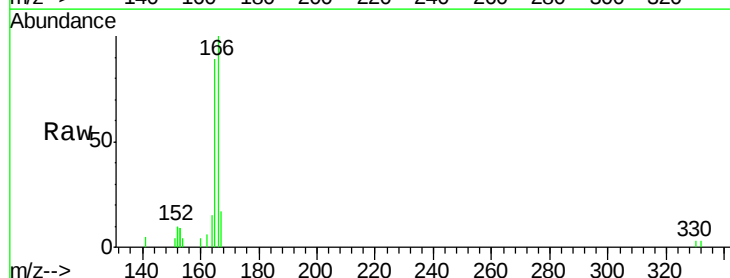
Tgt Ion:166 Resp: 2324

Ion Ratio Lower Upper

166 100

165 94.5 74.4 111.6

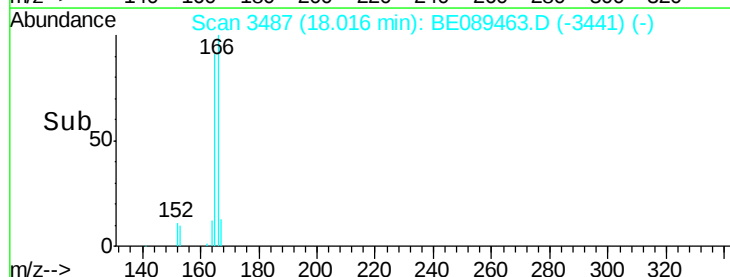
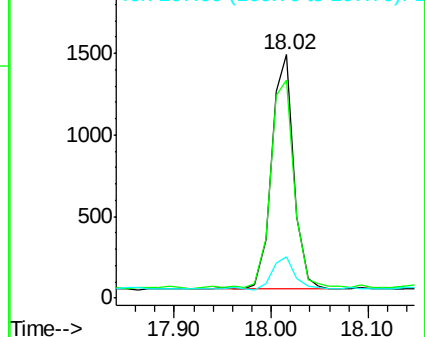
167 14.1 10.6 15.8

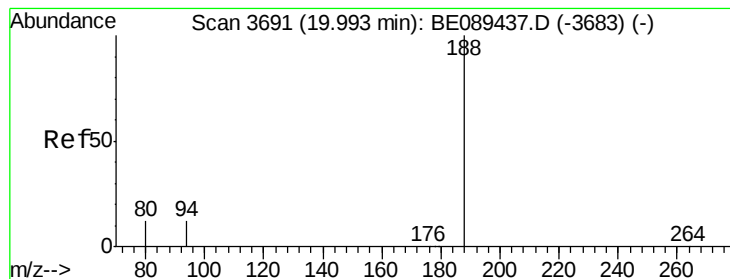


Abundance Ion 166.00 (165.70 to 166.70): E

Ion 165.00 (164.70 to 165.70): E

Ion 167.00 (166.70 to 167.70): E

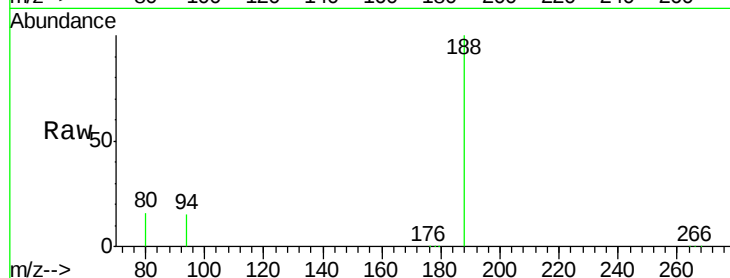




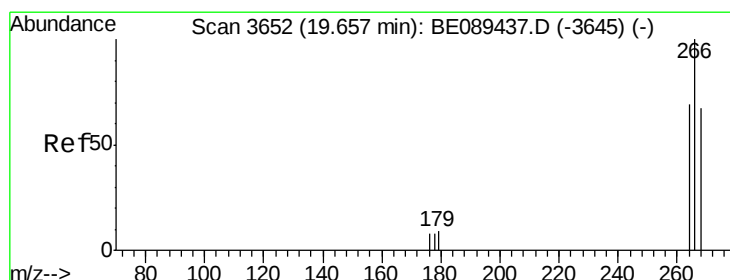
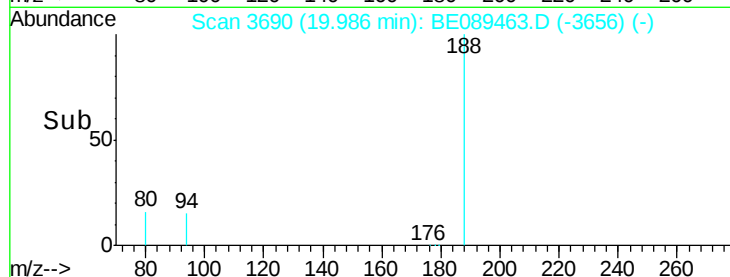
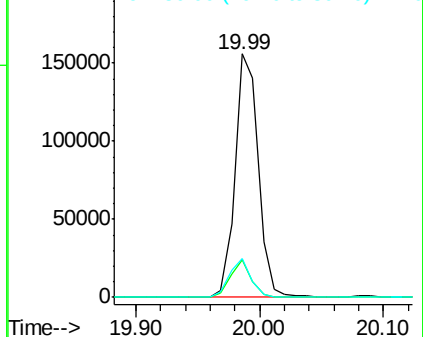
#11  
Phenanthrene-d10  
Concen: 5.00 ng  
RT: 19.99 min Scan# 3690  
Delta R.T. -0.01 min  
Lab File: BE089463.D  
Acq: 31 Jan 2015 8:59

Instrument :  
BNA\_E  
ClientSampleId :

Tgt Ion:188 Resp: 203462  
Ion Ratio Lower Upper  
188 100  
94 15.3 9.4 14.0#  
80 16.1 9.3 13.9#

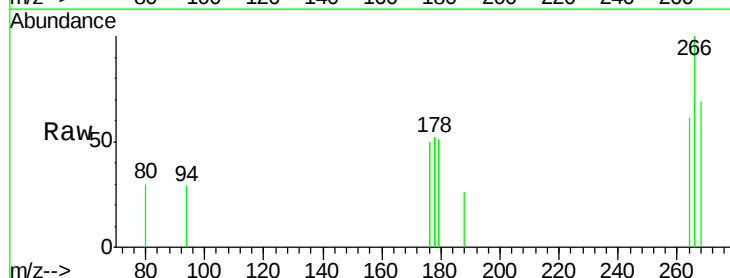


Abundance Ion 188.00 (187.70 to 188.70): E  
Ion 94.00 (93.70 to 94.70): BE0  
Ion 80.00 (79.70 to 80.70): BE0

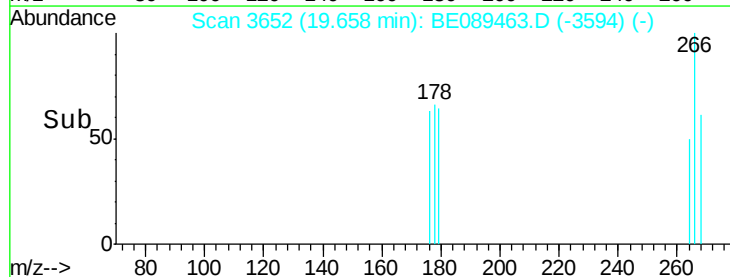
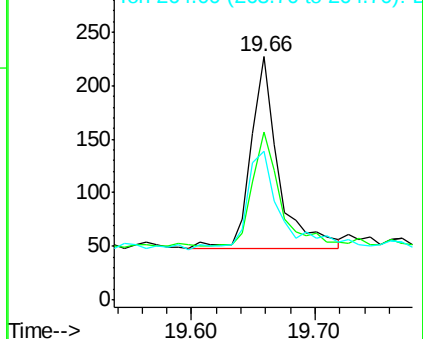


#12  
Pentachlorophenol  
Concen: Below Cal  
RT: 19.66 min Scan# 3652  
Delta R.T. 0.00 min  
Lab File: BE089463.D  
Acq: 31 Jan 2015 8:59

Tgt Ion:266 Resp: 278  
Ion Ratio Lower Upper  
266 100  
268 69.2 54.2 81.4  
264 61.2 56.2 84.2



Abundance Ion 265.70 (265.40 to 266.40): E  
Ion 268.00 (267.70 to 268.70): E  
Ion 264.00 (263.70 to 264.70): E





#13

Phenanthrene

Concen: 0.08 ng

RT: 20.03 min Scan# 3695

Delta R.T. 0.00 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

Instrument :

BNA\_E

ClientSampleId :

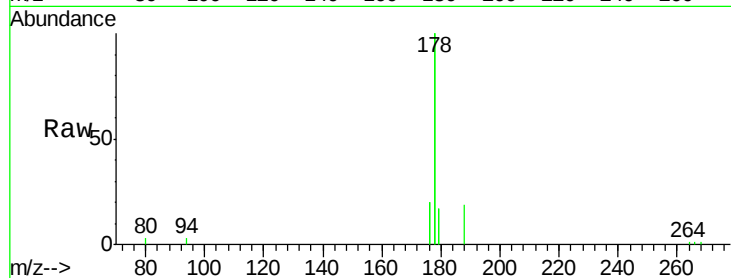
Tgt Ion:178 Resp: 15013

Ion Ratio Lower Upper

178 100

176 18.2 15.1 22.7

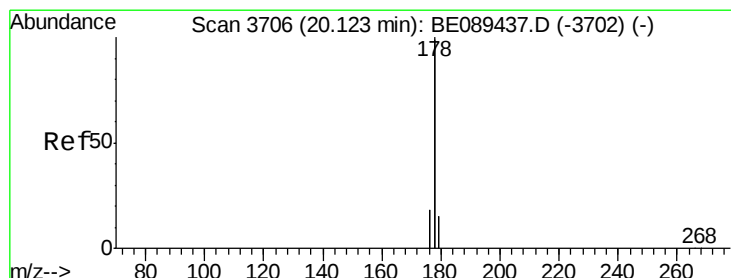
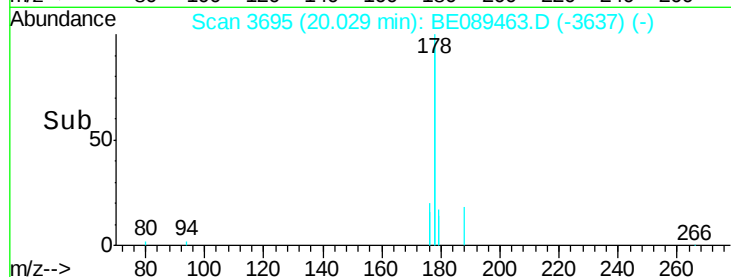
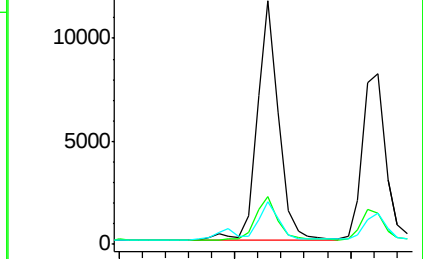
179 14.8 12.3 18.5



Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E



#14

Anthracene

Concen: 0.06 ng

RT: 20.12 min Scan# 3706

Delta R.T. 0.00 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

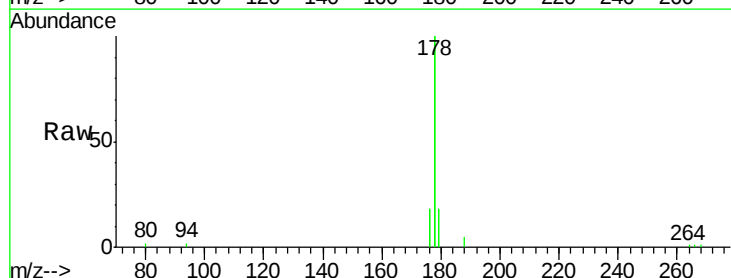
Tgt Ion:178 Resp: 11428

Ion Ratio Lower Upper

178 100

176 17.3 14.6 22.0

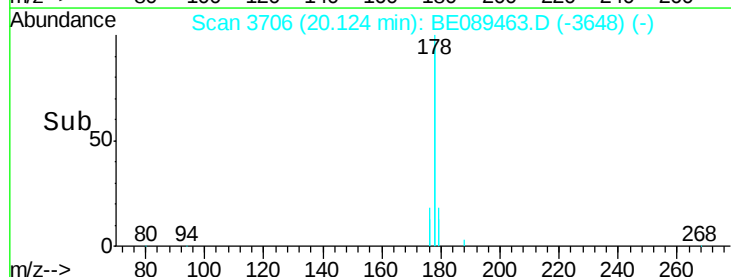
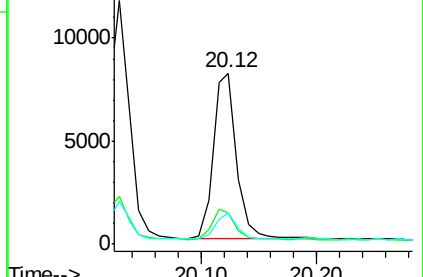
179 15.5 12.2 18.2

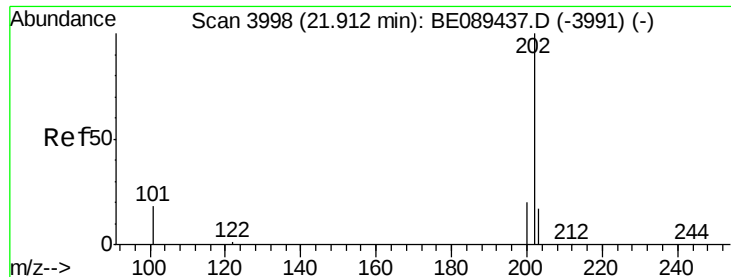


Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E

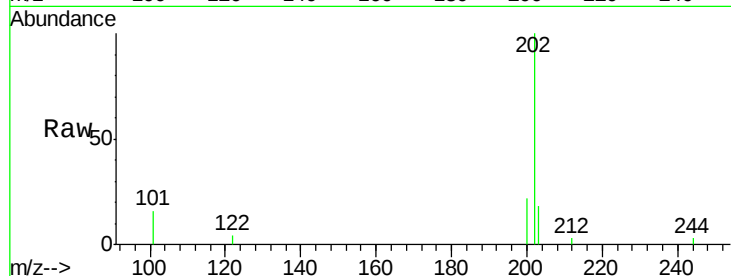




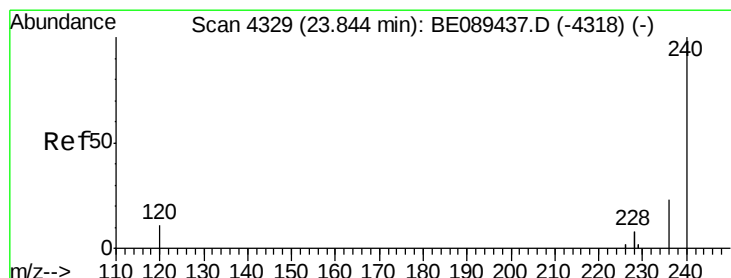
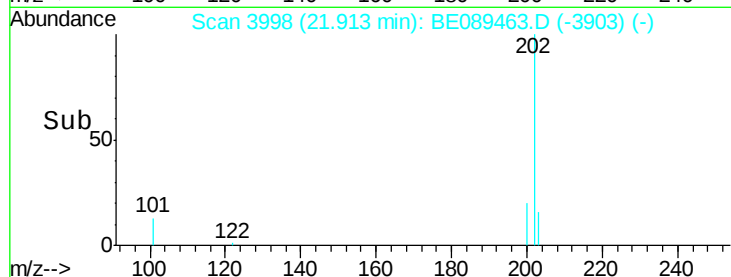
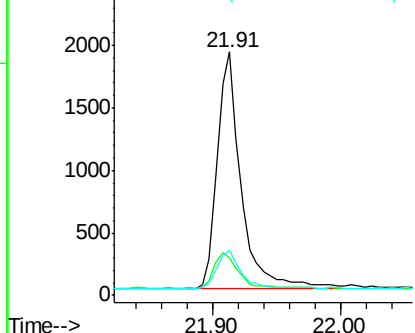
#15  
 Fluoranthene  
 Concen: 0.06 ng  
 RT: 21.91 min Scan# 3998  
 Delta R.T. 0.00 min  
 Lab File: BE089463.D  
 Acq: 31 Jan 2015 8:59

Instrument :  
 BNA\_E  
 ClientSampleId :

Tgt Ion: 202 Resp: 2451  
 Ion Ratio Lower Upper  
 202 100  
 101 15.7 13.6 20.4  
 203 16.0 13.8 20.6

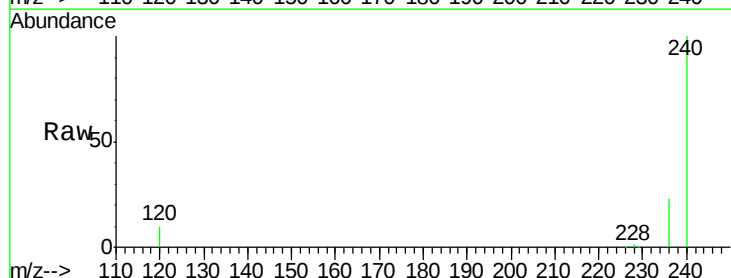


Abundance Ion 202.00 (201.70 to 202.70): E  
 Ion 101.00 (100.70 to 101.70): E  
 Ion 203.00 (202.70 to 203.70): E

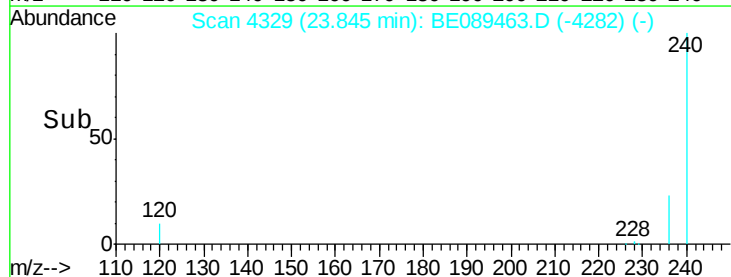
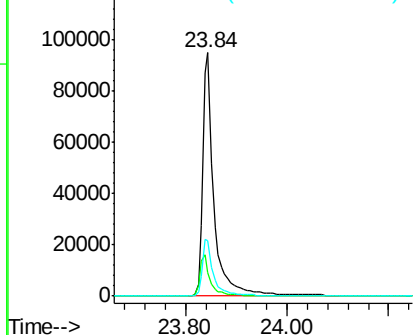


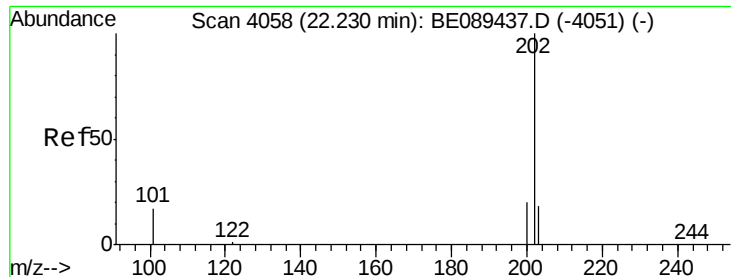
#16  
 Chrysene-d12  
 Concen: 5.00 ng  
 RT: 23.84 min Scan# 4329  
 Delta R.T. 0.00 min  
 Lab File: BE089463.D  
 Acq: 31 Jan 2015 8:59

Tgt Ion: 240 Resp: 144057  
 Ion Ratio Lower Upper  
 240 100  
 120 9.7 8.6 13.0  
 236 22.7 18.7 28.1



Abundance Ion 240.00 (239.70 to 240.70): E  
 Ion 120.00 (119.70 to 120.70): E  
 Ion 236.00 (235.70 to 236.70): E

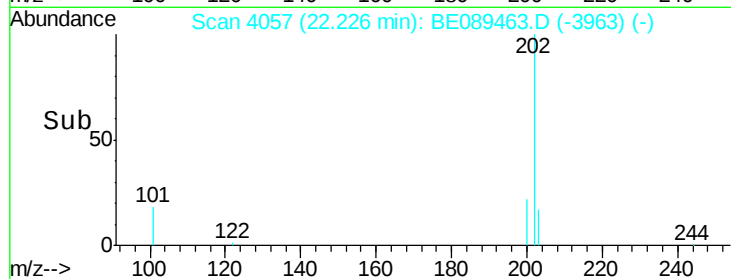
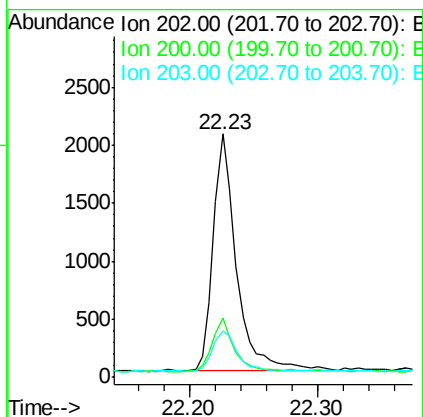
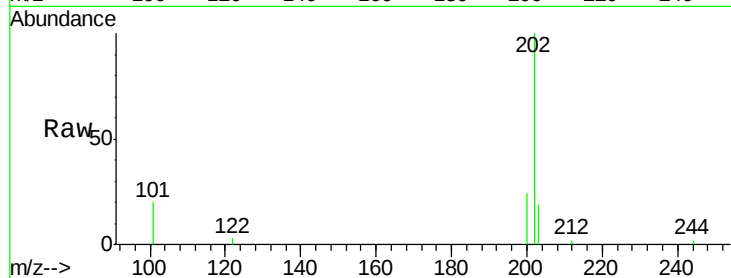




#17  
 Pyrene  
 Concen: 0.07 ng  
 RT: 22.23 min Scan# 4057  
 Delta R.T. -0.00 min  
 Lab File: BE089463.D  
 Acq: 31 Jan 2015 8:59

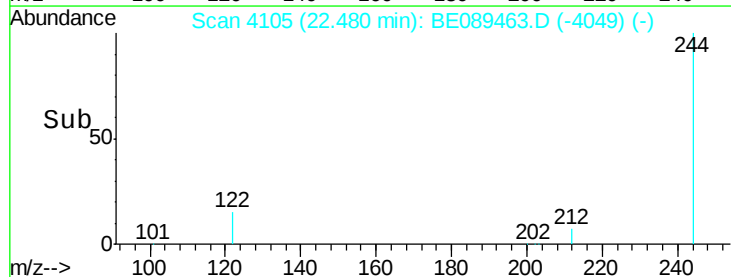
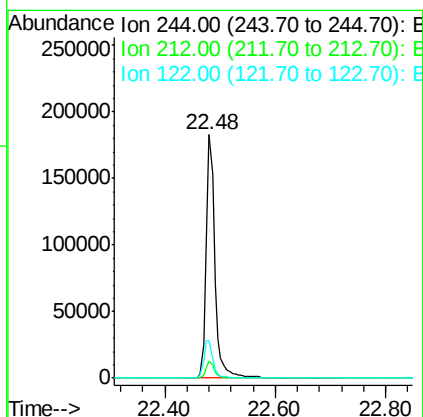
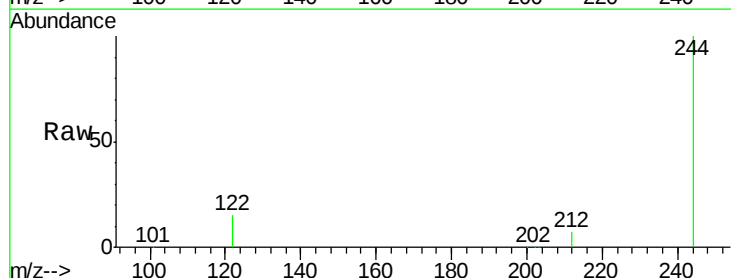
Instrument :  
 BNA\_E  
 ClientSampled :

Tgt Ion: 202 Resp: 2588  
 Ion Ratio Lower Upper  
 202 100  
 200 20.6 16.2 24.4  
 203 18.0 13.8 20.8



#18  
 Terphenyl-d14  
 Concen: 9.34 ng  
 RT: 22.48 min Scan# 4105  
 Delta R.T. -0.00 min  
 Lab File: BE089463.D  
 Acq: 31 Jan 2015 8:59

Tgt Ion: 244 Resp: 201513  
 Ion Ratio Lower Upper  
 244 100  
 212 6.8 5.0 7.6  
 122 15.5 10.2 15.4#





#19

Benzo(a)anthracene

Concen: 0.06 ng

RT: 23.83 min Scan# 4327

Delta R.T. 0.00 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

Instrument :

BNA\_E

ClientSampleId :

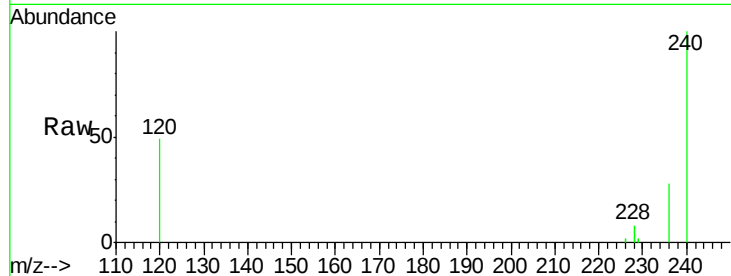
Tgt Ion:228 Resp: 6824

Ion Ratio Lower Upper

228 100

226 28.3 20.0 30.0

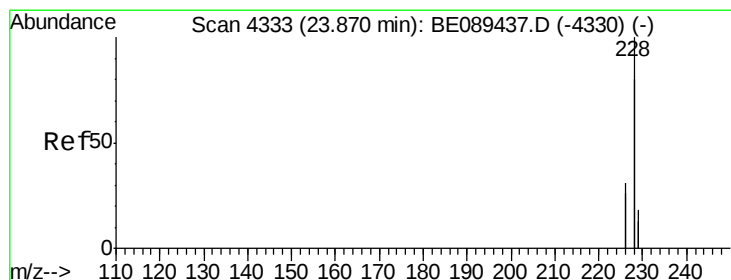
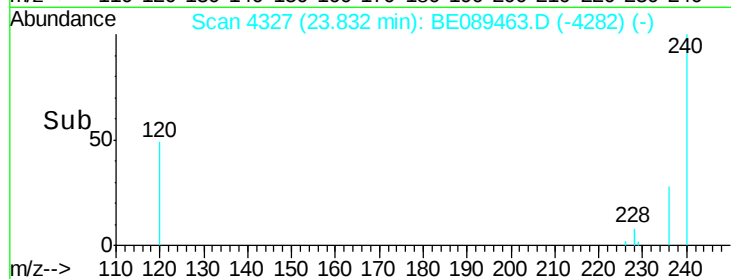
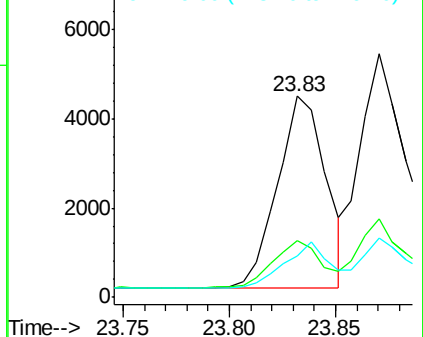
229 20.8 16.0 24.0



Abundance Ion 228.00 (227.70 to 228.70): E

Ion 226.00 (225.70 to 226.70): E

Ion 229.00 (228.70 to 229.70): E



#20

Chrysene

Concen: 0.05 ng

RT: 23.83 min Scan# 4327

Delta R.T. -0.04 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

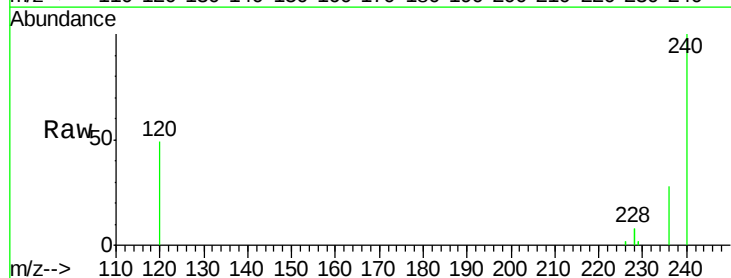
Tgt Ion:228 Resp: 6824

Ion Ratio Lower Upper

228 100

226 28.3 24.5 36.7

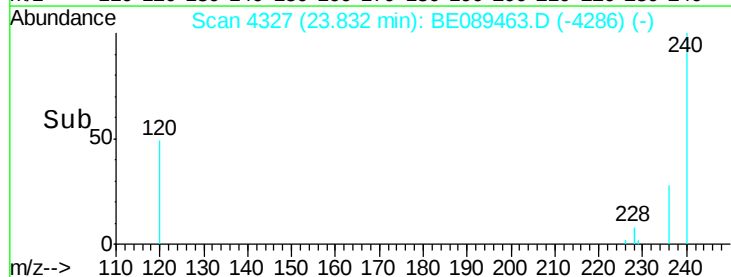
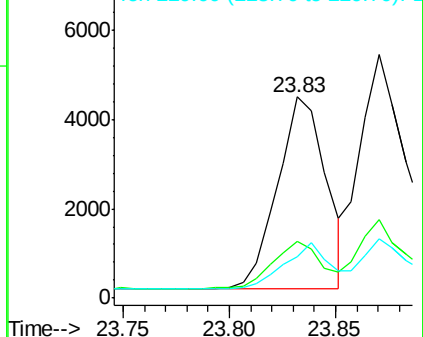
229 20.8 14.1 21.1

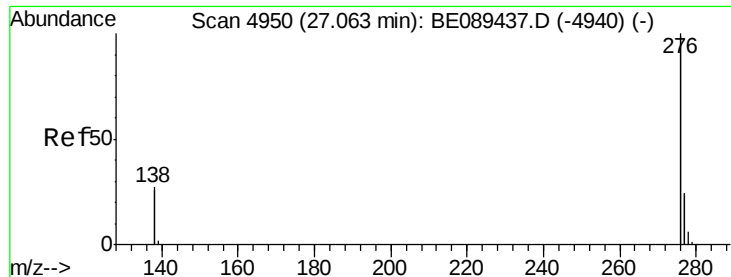


Abundance Ion 228.00 (227.70 to 228.70): E

Ion 226.00 (225.70 to 226.70): E

Ion 229.00 (228.70 to 229.70): E

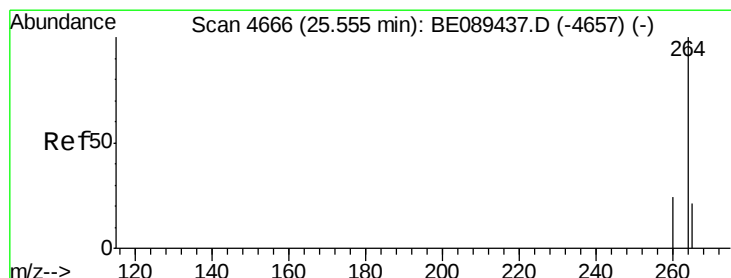
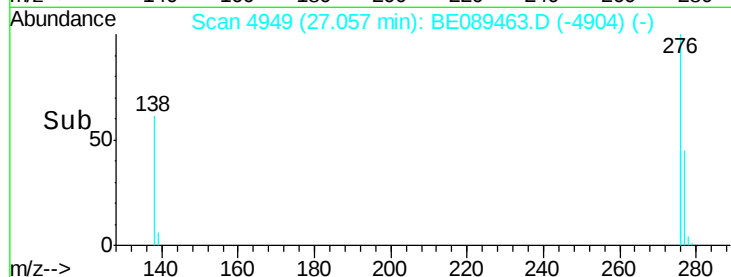
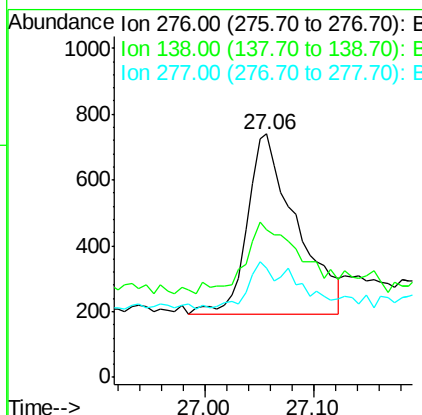
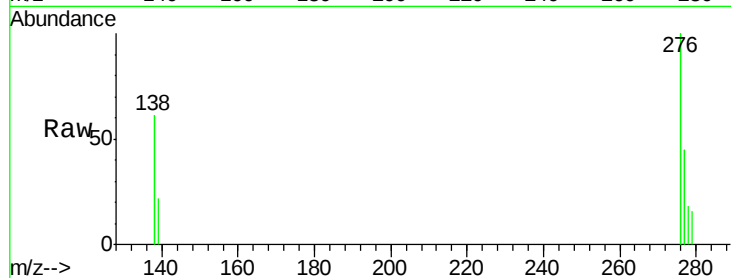




#21  
 Indeno(1,2,3-cd)pyrene  
 Concen: 0.01 ng  
 RT: 27.06 min Scan# 4949  
 Delta R.T. -0.01 min  
 Lab File: BE089463.D  
 Acq: 31 Jan 2015 8:59

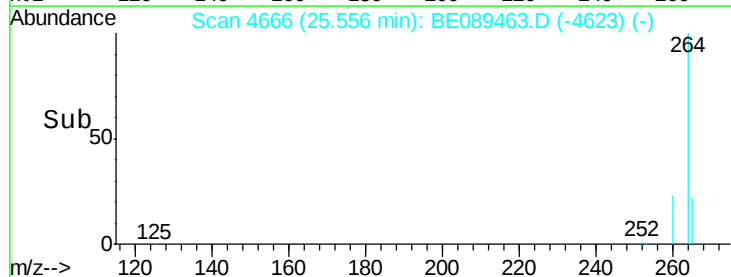
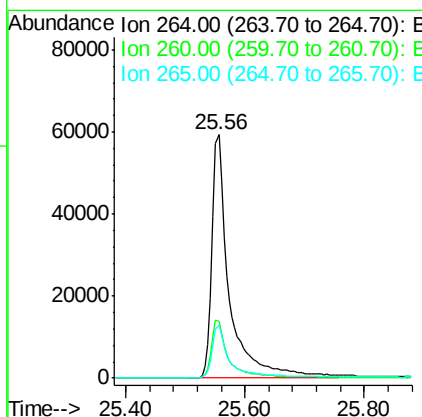
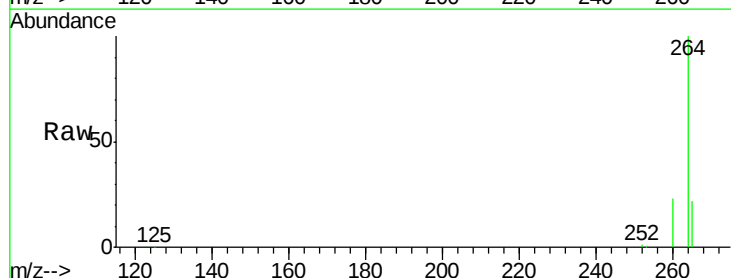
Instrument :  
 BNA\_E  
 ClientSampleId :

Tgt Ion: 276 Resp: 1721  
 Ion Ratio Lower Upper  
 276 100  
 138 34.6 25.4 38.0  
 277 12.6 19.8 29.6#



#22  
 Perylene-d12  
 Concen: 5.00 ng  
 RT: 25.56 min Scan# 4666  
 Delta R.T. 0.00 min  
 Lab File: BE089463.D  
 Acq: 31 Jan 2015 8:59

Tgt Ion: 264 Resp: 119588  
 Ion Ratio Lower Upper  
 264 100  
 260 23.1 19.4 29.0  
 265 21.8 17.0 25.6

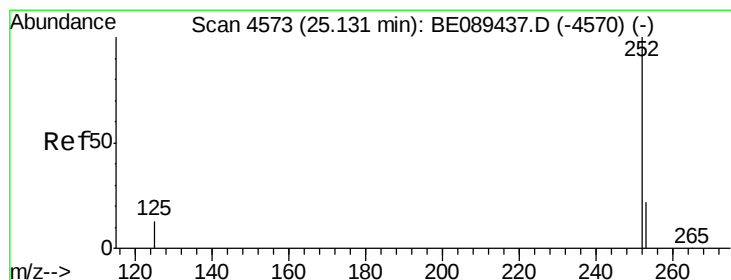
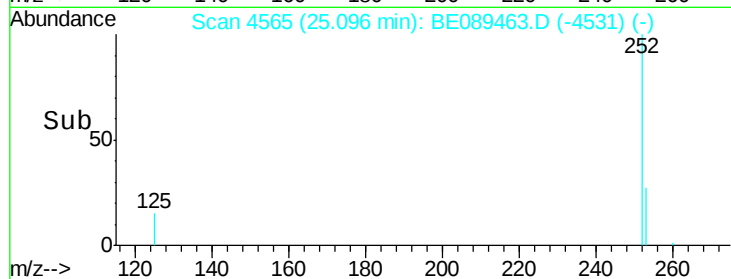
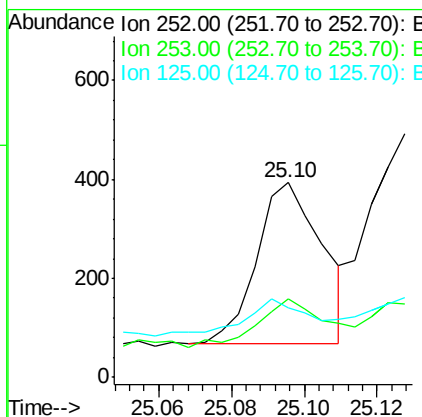
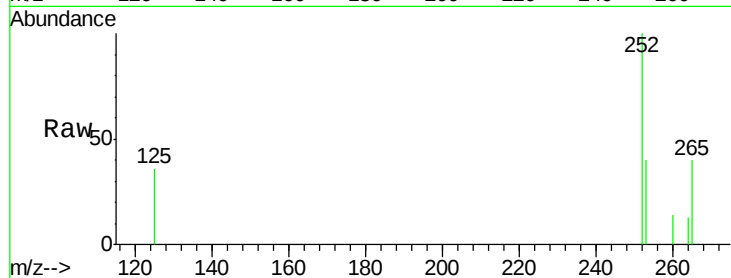




#23  
Benzo(b)fluoranthene  
Concen: 0.20 ng  
RT: 25.10 min Scan# 4565  
Delta R.T. -0.00 min  
Lab File: BE089463.D  
Acq: 31 Jan 2015 8:59

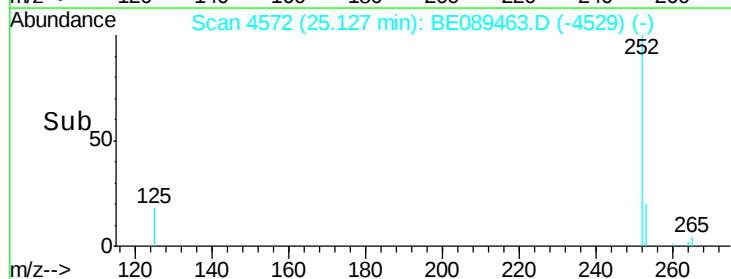
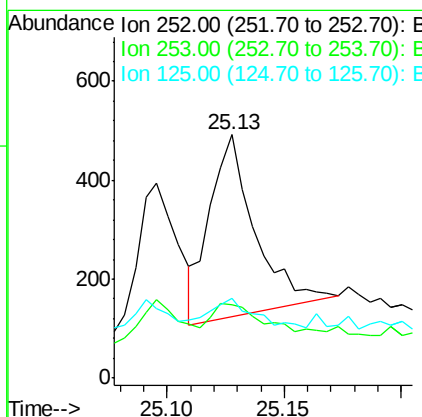
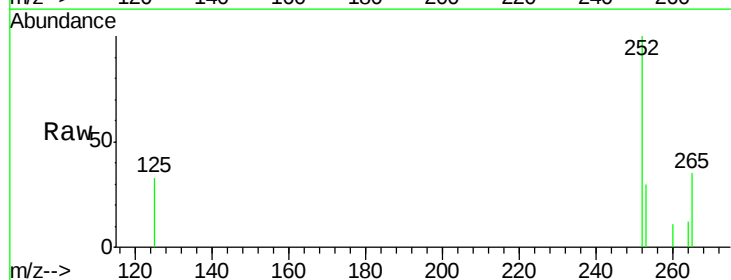
Instrument :  
BNA\_E  
ClientSampleId :

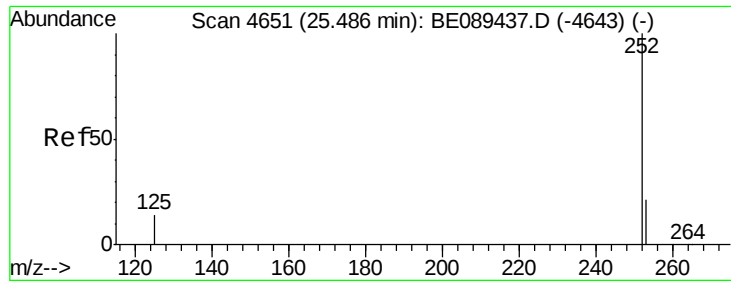
Tgt Ion: 252 Resp: 405  
Ion Ratio Lower Upper  
252 100  
253 40.5 17.0 25.6#  
125 35.6 11.4 17.0#



#24  
Benzo(k)fluoranthene  
Concen: 0.02 ng  
RT: 25.13 min Scan# 4572  
Delta R.T. -0.00 min  
Lab File: BE089463.D  
Acq: 31 Jan 2015 8:59

Tgt Ion: 252 Resp: 502  
Ion Ratio Lower Upper  
252 100  
253 30.3 17.4 26.2#  
125 32.5 10.9 16.3#





#25

Benzo(a)pyrene

Concen: 0.14 ng

RT: 25.48 min Scan# 4649

Delta R.T. -0.01 min

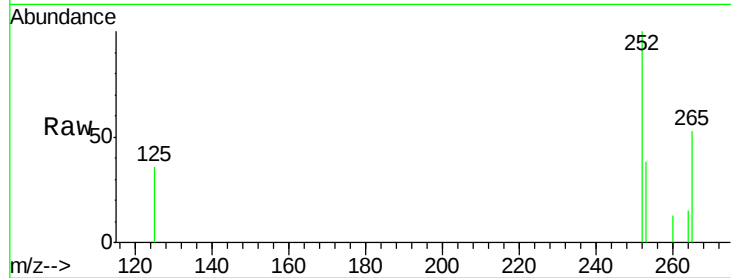
Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

Instrument :

BNA\_E

ClientSampleId :



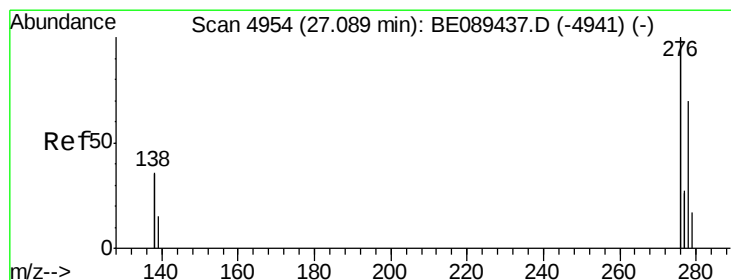
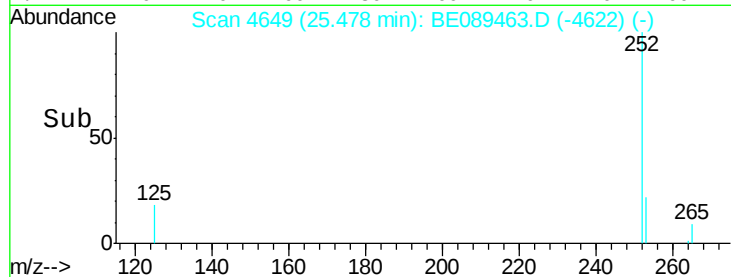
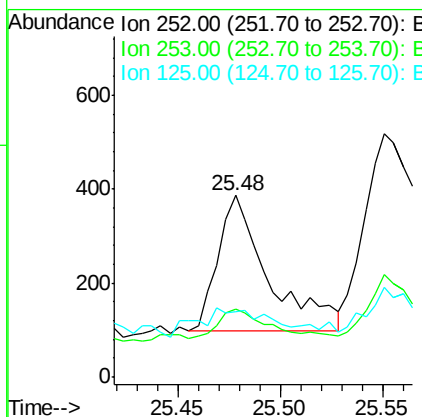
Tgt Ion: 252 Resp: 492

Ion Ratio Lower Upper

252 100

253 37.6 17.3 25.9#

125 36.0 12.0 18.0#



#26

Dibenzo(a,h)anthracene

Concen: 0.14 ng

RT: 27.08 min Scan# 4953

Delta R.T. -0.01 min

Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

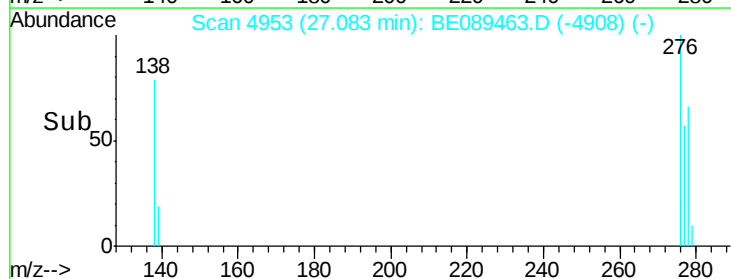
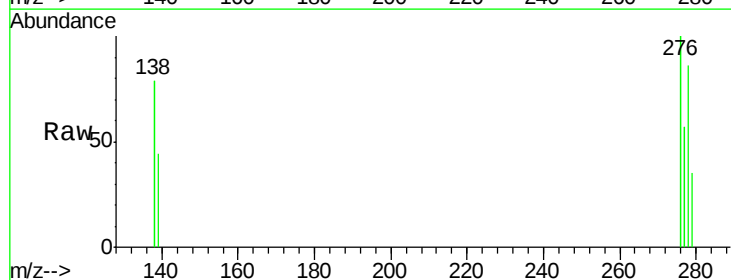
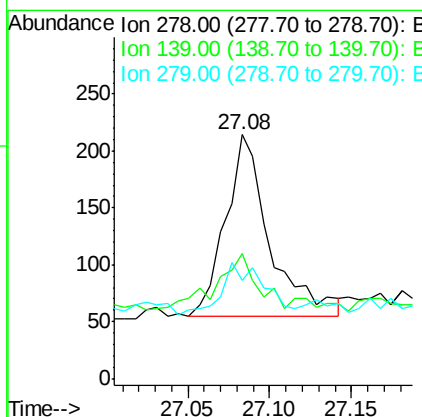
Tgt Ion: 278 Resp: 300

Ion Ratio Lower Upper

278 100

139 51.4 17.0 25.4#

279 40.2 19.1 28.7#





#27

Benzo(g,h,i)perylene

Concen: 0.02 ng

RT: 27.51 min Scan# 5018

Delta R.T. 0.00 min

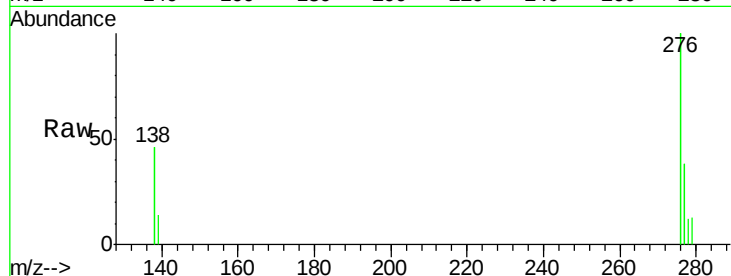
Lab File: BE089463.D

Acq: 31 Jan 2015 8:59

Instrument :

BNA\_E

ClientSampleId :



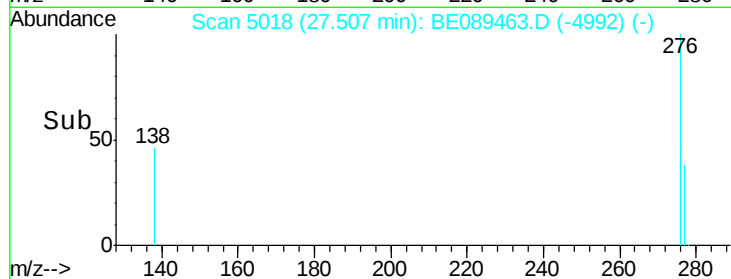
Tgt Ion: 276 Resp: 2111

Ion Ratio Lower Upper

276 100

277 37.9 18.4 27.6#

138 46.0 23.7 35.5#



Abundance Ion 276.00 (275.70 to 276.70): E

Ion 277.00 (276.70 to 277.70): E

Ion 138.00 (137.70 to 138.70): E

